VII. Public Facilities

A. Introduction

The inclusion of public facilities issues is a distinguishing feature of SPA Plans. This portion of the plan outlines the public facilities which enable the community to function properly.

The Otay Ranch GDP establishes the following goal regarding the provision of public facilities:

> *GOAL: ASSURE THE EFFICIENT AND TIMELY PROVISION OF PUBLIC SERVICES AND FACILITIES TO DEVELOPABLE AREAS OF OTAY RANCH CONCURRENT WITH NEED.*

This chapter outlines the local and regional public facilities necessary to serve the Otay Ranch Eastern Urban Center SPA. The Public Facilities Finance Plan (PFFP) provides additional descriptions of public infrastructure and financing mechanisms planned for each facility. The public facilities described in this section have been sized and designed in response to the planned distribution of land uses shown on Exhibit I-6 (Site Utilization Plan).

This section examines local facilities including water, water conservation, recycled water, sewer, drainage, urban runoff, schools, parks, recreation, open space and trails, law enforcement, fire protection, animal control, civic, library and child care facilities.

This chapter is a summary of the information, recommendations and conclusions contained in other documents. All public services, facilities financing and phasing issues are addressed in the Eastern Urban Center SPA Public Facilities Finance Plan. Additionally, some facilities are the subject of separately prepared master plans which are included in the Technical Appendices. There are two grading options presented in Chapter IV. These alternative would have cause some variation to the provision and location of public facilities. These variations are included herein as alternatives and in evaluated in all technical reports as a part of the project.

Prior to approval of the first final map, a Sub Area Master plan (SAMP) shall be approved by the Otay Water District (OWD) and submitted to the City of Chula Vista. This SAMP will identify the potable and reclaimed water facilities necessary to serve the EUC. Should the SAMP identify facilities, not contemplated in the SPA or PFFP. then the SAMP shall take precedence, but not require an amendment to these documents.

B. Potable Water System

Water service and facilities are addressed in the Eastern Urban Center SPA Conceptual Water and Recycled Water Study prepared by PBS&J and dated January 2008 and the addendum letter dated May 8, 2008. The phasing and financing of water facilities is more thoroughly addressed in the Otay Ranch Eastern Urban Center SPA PFFP.

The Otay Ranch GDP establishes the following goal for water service:

GOAL: ENSURE AN ADEQUATE SUPPLY OF WATER FOR BUILD-OUT OF THE ENTIRE OTAY RANCH PROJECT AREA; DESIGN THE OTAY RANCH PROJECT AREA TO MAXIMIZE WATER CONSERVATION.

The Otay Ranch GDP establishes the following threshold for water facilities:

Threshold: Ensure an adequate supply of water on a long-term basis, prior to the development of each Otay Ranch SPA.

The Metropolitan Water District and the County Water Authority plan to provide long term water supplies to member agencies to meet projected water demand based upon regional population forecasts. Development of the Otay Valley Parcel of Otay Ranch, including the Eastern Urban Center SPA, is included in the adopted Series 8 regional population forecast.

Approximately 90% of the water used in the San Diego County Water Authority area is imported from the Metropolitan Water District. The Metropolitan Water District transports its water supply through the State Water Project and the Colorado River Aqueduct. The San Diego County Water Authority conveys water from the MWD to local water purveyors within San Diego County.

Potable water is provided to the Central Service Area of the Otay Water District via the Second San Diego Aqueduct. Water is delivered at Aqueduct connections No. 10 and No. 12 and is conveyed by gravity to the Central Service Area emergency/operating reservoirs at a grade of 624 feet. Water is then pumped to the existing 980 pressure zone (PZ).

The Otay Water District has established criteria to determine pressure zone boundaries within new and existing developments. The criteria constitute minimum and maximum allowable pressures and maximum velocity thresholds within the distribution system piping under specified system operating conditions. These were used to determine pressure zone service area boundaries in the area of the project. The entire Eastern Urban Center SPA will be served by the 980 PZ.

There are two existing reservoirs in the 980 PZ. These reservoirs are located within the District's Use Area north of the Rolling Hills Ranch development. The reservoirs have a capacity of 5.0 MG each for a total of 10.0 MG.

Emergency storage for the 980 zone is provided in the 624 zone reservoirs. Other than providing a supply of water to the Central Area Pump Station, the 624 zone will not be utilized to serve the Eastern Urban Center.

The Central Area Pump Station, located at the Patzig Reservoir site, pumps water from the 624 PZ to the 711 PZ distribution system. The pump station currently has five pumps (including one standby), each rated for approximately 4,000 gallons per minute (gpm) which results in a firm capacity of about 16,000 gpm. The 980 zone receives potable water from the 980-2, which lifts water from the 624 PZ to the 980 PZ distribution system. This pump station is located north of

Olympic Parkway at Eastlake Parkway and houses five 5,700 gpm pumps (including one standby) for a firm capacity of 22,800 gpm.

In conjunction with the construction of other portions of Otay Ranch, the existing 980 Zone main in EastLake Parkway and a main in Birch Road have been constructed. These form a backbone distribution loop comprised of a 20-inch pipeline in EastLake Parkway south from Olympic Parkway past Birch Road to Hunte Parkway, and a 12-inch pipe in Birch Road which extends west toward the future SR-125 to connect to the existing 12-inch potable water main. The proposed 16 and 12-inch potable water mains within the Eastern Urban Center SPA will connect to the existing mains in Birch Road and EastLake Parkway, see Exhibit VII-1 (Potable Water Plan). Based on the projected demands and system looping, on-site potable water facilities will likely range from 8 to 12 inches in diameter, pending final land use and fire flow requirements.

The proposed project will be required to provide all potable water improvements needed to serve the project when constructed without relying on the phased construction of adjacent projects which are planned to provide improvements.

In July 2007, the Otay Water District approved a Water Supply Assessment and Verification Report for the EUC SPA project. The report demonstrates that the water demand projections for this project are included in the water demand and supply forecasts within the Urban Water Management Plans and other water resource planning documents of the Otay Water District, San Diego County Water Authority and Metropolitan Water District of Southern California. These documents also demonstrate that sufficient water supplies (over a 20-year planning horizon and in single and multiple dry years), or the actions necessary to develop these supplies, have been identified to meet the projected demand of the EUC SPA project. In addition, the EUC SPA plans to implement best management practices for water conservation, in accordance with the California Urban Water Conservation Council guidelines.

Estimated average daily Eastern Urban Center potable water demand is calculated in Table C (Potable Water Demand), below. This table does not take into account water conservation measures, which are detailed in the Sustainability Element.

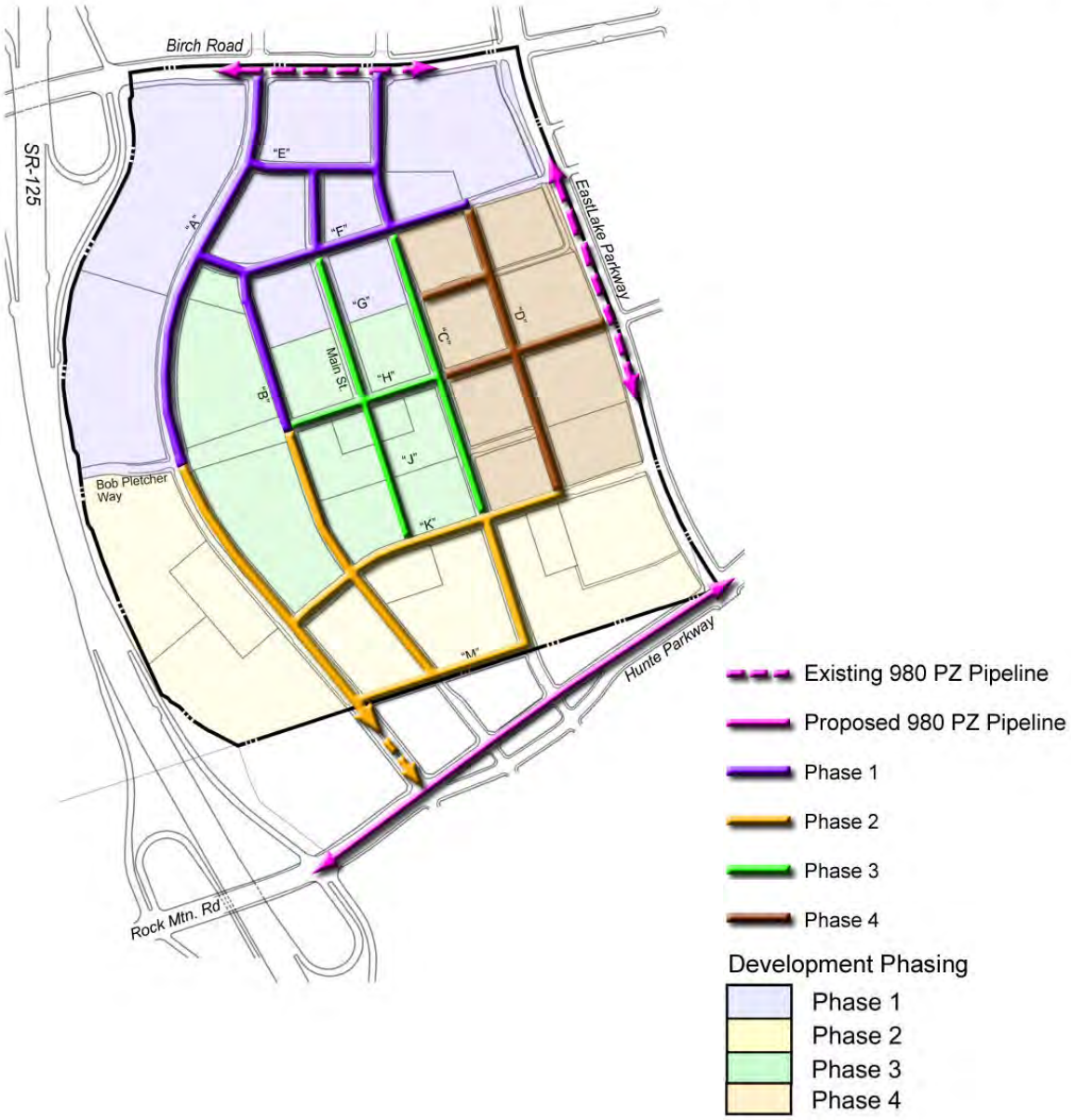
Table C
Potable Water Demand

Land Use	Area (Acres)	Units	Water Demand (gpd)
Residential	143.2	2,983 DUs	760,665
Commercial/Office		3,314 Msf	122,221
Fire Station		18 Ksf	295
Hotel		150 rooms	17,250
Parks	12.8	--	7,950
Right-of-Way	50.5	--	0
TOTAL	**206.5**		**908,381**

gpd = gallons per day

Source: Powell PBS&J

Potable Water System



Eastern Urban Center
OTAY RANCH

CITY OF CHULA VISTA

Source: PBS&J
Urban Design: RTKL
Cinti Land Planning
San Diego, CA (619) 223-7408

Exhibit VII-1

C. Recycled Water System

Recycled water service and facilities are addressed in the Eastern Urban Center Conceptual Water and Recycled Water Study prepared by PBS&J, dated January 2008. The phasing and financing of recycled water facilities is more thoroughly addressed in the Otay Ranch Eastern Urban Center SPA PFFP.

The Otay Ranch GDP provides the following goal for water reclamation:

> *GOAL: DESIGN A SEWERAGE SYSTEM WHICH WILL PRODUCE RECLAIMED WATER. ENSURE A WATER DISTRIBUTION SYSTEM WILL BE DESIGNED AND CONSTRUCTED TO USE RECLAIMED WATER. CONSTRUCTION OF A DUAL SYSTEM OF WATER SUPPLY WILL BE REQUIRED FOR ALL DEVELOPMENT WHERE RECLAIMED WATER IS USED.*

The Otay Ranch GDP establishes the following threshold relative to recycled water:

> *Threshold: Design a sewerage system which will produce reclaimed water. Ensure a water distribution system will be designed and constructed to use reclaimed water. Construction of a "dual system" of water supply will be required for all development where reclaimed water is used.*

Consistent with the Otay Ranch GDP, a dual system for potable and recycled water will be constructed. Recycled water will be used to irrigate street parkway landscaping, parking lot landscaping and manufactured slopes along open space slope areas.

Recycled water supply is currently available to the Otay Ranch area from both the 1.3 mgd capacity Ralph W. Chapman Water Recycling Facility (WRF) located near the intersection of Singer Lane and Highway 94 and from the City of San Diego's 15.0 mgd South Bay Water Reclamation Plan. It is anticipated that the Eastern Urban Center will receive recycled water via proposed connections to the 944 Recycled Water Zone distribution systems.

Two existing lined and covered ponds totaling 28.3 MG located within the Otay Water District Use Area provide operational storage for the 944 Recycled Zone. The ponds are connected to an existing 20-inch transmission main in Lane Avenue which runs south to an existing main in Otay Lakes Road. The distribution system extends south the Eastern Urban Center site via a main in EastLake Parkway. Recycled water is currently available at the EUC site from existing 8-inch mains in EastLake Parkway, Bob Pletcher Way (Village Seven), and Birch Road.

Recycled water will be supplied to the Eastern Urban Center through connections to the existing both recycled water mains adjacent to the site, see Exhibit VII-2 (Recycled Water). The proposed project will be required to provide all recycled water improvements needed to serve the project when constructed without relying on the phased construction of adjacent projects which are planned to provide improvements.

The recommended recycled water distribution system for the Eastern Urban Center SPA is shown in Exhibit VII-2 Recycled Water Plan. The main pipelines along Birch Road, Hunte Parkway and Eastlake Parkway are all included as part of Otay Water District's Capital Improvement Plan (CIP). Onsite recycled water pipelines would most likely be sized at 8-inches in diameter, unless otherwise directed by the District. Recycled water pipelines will be installed concurrent with the phased construction of the potable water system.

Recycled water consumption within the Eastern Urban Center is calculated in Table D (Recycled Water Demand) below. These projections include a translation of mixed use buildings into categories commonly used for generation rates, which may not correlate exactly to Site Utilization Plan statistics.

Table D
Recycled Water Demand

Land Use	Area (ac)	Percent Irrigated	Irrigated Area (ac)	Average Annual Day Demand (gpd)
Mixed Use Residential/Hotel & Commercial	143.2	10	14.3	30,853
Parks	12.8	100	12.8	27,562
Right-of-Way	50.5	5	2.5	5,446
TOTAL	**206.5**		**29.6**	**63,861**
gpd = gallons per day				Source: PBS&J

Total demand based on 2.41 acre-feet/acre-year per the District's Master Plan, or approximately 2,155 gpd/ac.
This table does not take into account water conservation measures, which are detailed in the Sustainability Element.

Recycled Water System

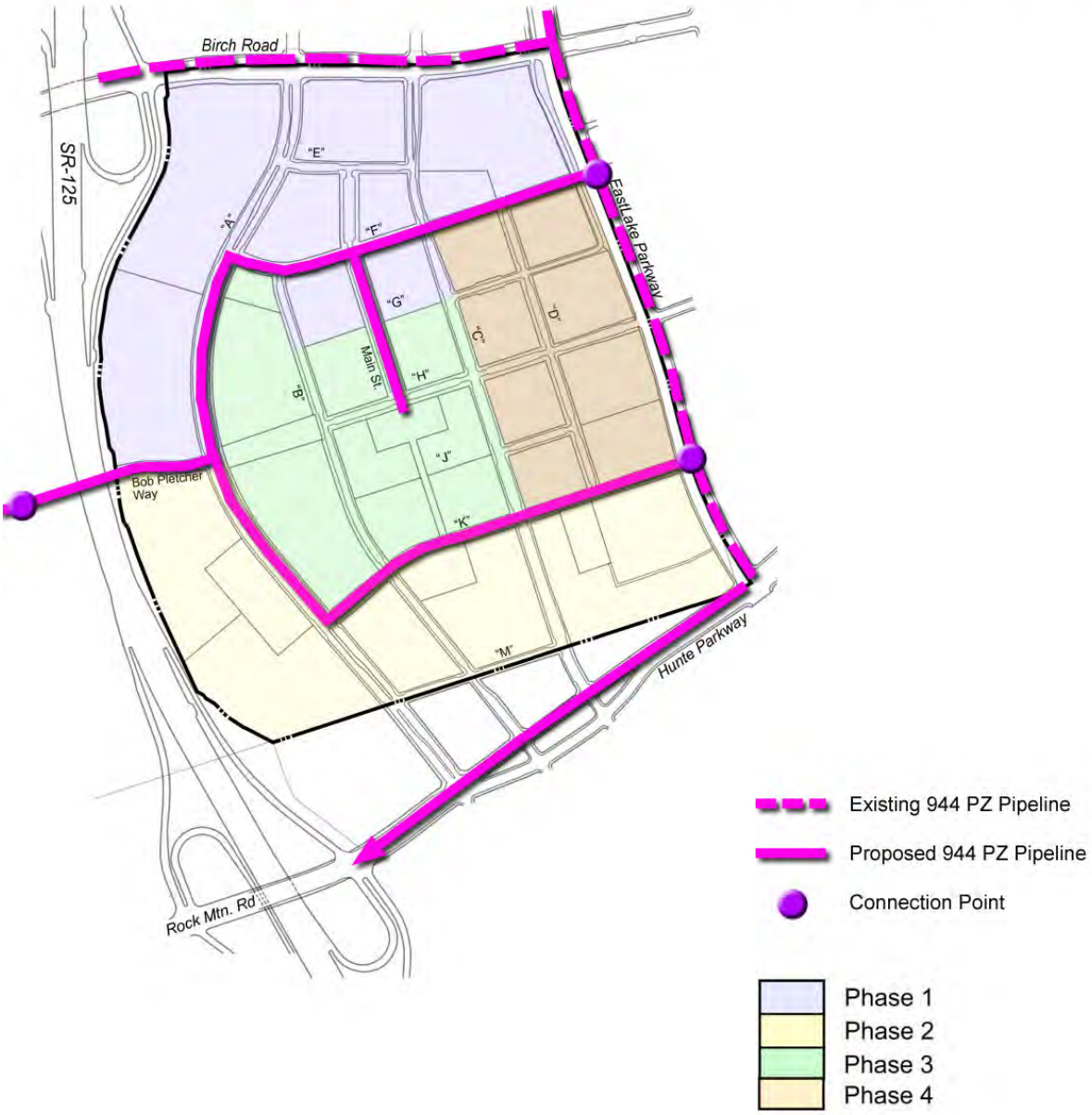


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Exhibit VII-2

D. Sewer Service System

Sewerage services and facilities are addressed in the Eastern Urban Center Conceptual Sewer Study prepared by PBS&J and dated January 2008. The phasing and financing of sewerage facilities is more thoroughly addressed in the Otay Ranch Eastern Urban Center SPA PFFP.

The Otay Ranch GDP establishes the following goal for sewerage facilities:

> *GOAL: PROVIDE A HEALTHFUL AND SANITARY SEWERAGE COLLECTION AND DISPOSAL SYSTEM FOR THE RESIDENTS OF OTAY RANCH AND THE REGION, INCLUDING A SYSTEM DESIGNED AND CONSTRUCTED TO ACCOMMODATE THE USE OF RECYCLED WATER.*

The City of Chula Vista provides wastewater services in the project vicinity. Chula Vista operates and maintains its own sanitary sewer collection system which connects to the City of San Diego's Metropolitan Sewer System. The Otay Ranch Master Plan of Sewerage prepared in October 1993 by Wilson Engineering documented the feasibility of providing sewer service to the project area.

An existing 10-inch sewer main in Birch Road will serve the northern lots of the EUC. This pipeline will ultimately convey sewer flows to the Poggi Canyon Trunk Sewer. A majority of the remaining portion of the EUC will flow by gravity to a proposed diversion structure along Bob Pletcher Parkway at the far westerly end of the project. This structure will temporarily divert sewer flows back towards Eastlake Parkway where it will then flow in a recently constructed 12" sewer in EastLake and Hunte Parkways and connect to an existing 12-inch sewer at the intersection of Hunte Parkway and Exploration Falls Drive. This sewer ultimately connects to the Salt Creek Interceptor. This interim diversion will continue until such time that the Rock Mountain Trunk Sewer can be constructed and placed into service.

Based on the proposed grading for the site, it is anticipated that a majority of the site will drain toward Bob Pletcher Parkway and the diversion structure. The on-site pipelines will range from 8 to 12 inches in diameter. A portion of the site is proposed to be graded in such a way that it would be difficult to gravity the sewer flows to the diversion structure. These lots will permanently sewer east into Eastlake Parkway, then south into Hunte Parkway where it will continue to the connection to the Salt Creek Interceptor.

As the proposed land use and phasing for the EUC are subject to refinement, the proposed pipeline sizes and locations are based on the target land use plan and grading in option #1 and are considered adequate to allow for these refinements. Once the land use plan and phasing are finalized, a more detailed layout will be provided.

The proposed sewage system is shown in Exhibit VII-3 and an alternate as Exhibit VII-4 (Sewer Plan). The alternative sewer plan would be used if the on-site balanced grading option is used. Facilities will be phased to provide continuous service to the project throughout construction.

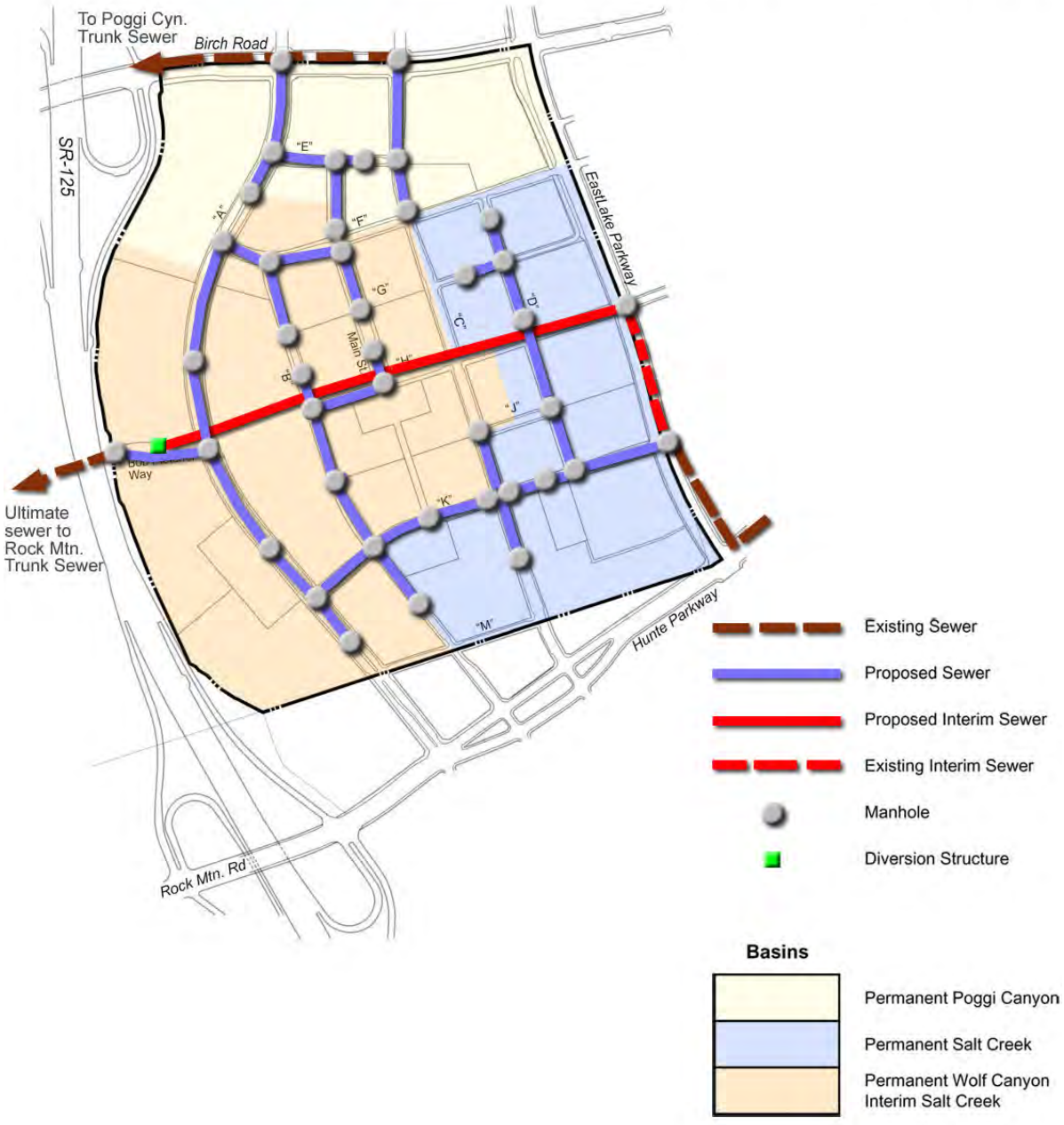
Units may be transferred between sewer sub-basins, limited by the capacity of each sewer main, as shown on exhibit B-2 of the "Eastern Urban Center Technical Sewer study", located in Appendix J of the EIR.

Sewage generation from the developed uses within the Eastern Urban Center are estimated in Table E (Sewage Generation) below. The land uses indicated are projections based on an expected mix of uses, but could vary as the project matures. However, as land uses may vary, the overall project demand will not be increased. The on-site sewer system has been sized to accommodate changes to land use density and location. These projections include a translation of mixed use buildings into categories commonly used for generation rates, which may not correlate exactly to Site Utilization Plan statistics.

Table E
Sewage Generation

Land Use	Gross Acres	Units	Total Sewer Demand (gpd)
Commercial/Fire station	143.2	3,332 Msf	239,038
Multi-family Residential		2,983 DU	592,871
Hotel (155 Ksf)		150 rooms	13,200
Parks	12.8	-	6,395
ROW	50.5	-	0
TOTAL	**206.5**		**851,504**
gpd = gallons per day			Source: PBS&J

Sewer System



Source: PBS&J
Urban Design: RTKL
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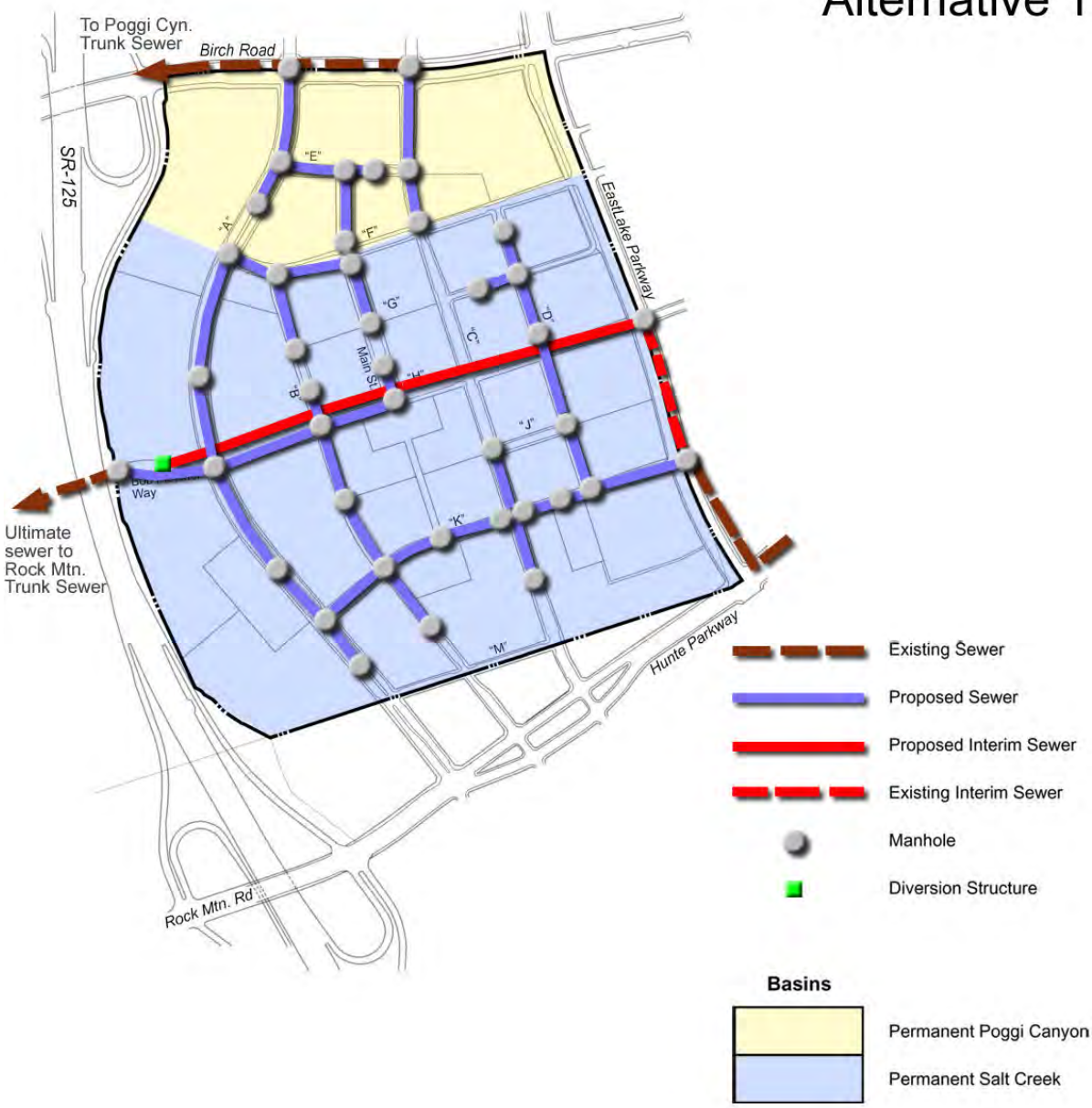
Eastern Urban Center
OTAY RANCH

Exhibit VII-3

Sewer System
Alternative 1



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Source: PBS&J
Urban Design: RTKL
Cinti Land Planning
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Exhibit VII-4

E. Storm Water Drainage System

Drainage facilities are addressed in the Preliminary Drainage Report for the McMillin Eastern Urban Center prepared by Rick Engineering, dated February 2007. The phasing and financing of drainage facilities is more thoroughly addressed in the Otay Ranch Eastern Urban Center SPA PFFP.

The Otay Ranch GDP establishes the following goal for drainage facilities:

> *GOAL: PROVIDE PROTECTION TO THE OTAY RANCH PROJECT AREA AND SURROUNDING COMMUNITIES FROM FIRE, FLOODING AND GEOLOGIC HAZARDS.*

The Otay Ranch GDP establishes the following threshold for drainage facilities:

> *Threshold: Storm water flows and volumes shall not exceed Engineering Standards of the governing land use jurisdiction.*

The City of Chula Vista is the governing land use jurisdiction for the Eastern Urban Center project so the project drainage system will need to meet city standards for drainage.

Throughout the EUC hydrologic planning area, the landscape is predominately rolling hills with arroyos draining to canyons that flow to the south and west, away from Salt Creek and the Otay Reservoir basins. The Eastern Urban Center site drains to three basins: Poggi (northerly portion of EUC site), Wolf Canyon (central portion), and Otay River (southerly portion). Wolf Canyon also ultimately discharges into the Otay River, two miles southwest of the EUC study area.

The Eastern Urban Center will be bounded by SR-125 on the west. The drainage from the central portion of the Eastern Urban Center will be conveyed under SR-l25 via existing infrastructure associated with the Bob Pletcher Way under crossing to the Regional W.Q. & Detention Facility located within Village 7 connecting Village Seven and the EUC.

There are four major drainage pathways for runoff leaving the McMillin EUC project site in both the pre-project and post-project condition. The northerly portion of the project area drains northerly then westerly to Poggi Canyon. The central portion of the project area drains westerly to Wolf Canyon. The southern portion of the project site drains southerly to the Otay River via two distinct un-named drainages. Each pathway is described in detail below. The two southerly drainages are described together because they are similar.

1. Northerly Drainage

The northerly portion of the McMillin EUC project area will be served by an on-site storm drain system that will convey runoff to an existing storm drain system in Birch Road. From Birch Road, runoff will continue northerly then westerly, through Otay Ranch Villages 6, 7, and Planning Area 12.

It will co-mingle with runoff from off-site from Otay Ranch Villages 6, 7, and Planning Area 12 and discharge to the existing Poggi Canyon Regional Detention Facility, which ultimately discharges to Poggi Canyon. The existing Poggi Canyon Regional Detention Facility was designed as part of a master drainage design for a reach of Poggi Canyon Creek. The design for the existing Poggi Canyon Regional Detention Facility, including calculations and details, is described in the report titled, "Master Drainage Study for Poggi Canyon Creek", dated October 14, 1999, prepared by Hunsaker & Associates. The runoff from the northern portion of the McMillin EUC project area will be contained in existing storm drain pipes for the entire length of travel between the McMillin EUC and the existing Poggi Canyon Regional Detention Facility. The storm drain system and the existing Poggi Canyon Regional Detention Facility were designed assuming the area of the McMillin EUC contributing to the basin would be 20.4 developed acres. The calculations for the storm drain system are included in the report titled, "Drainage Study for McMillin Ranch - Village 12," dated May 24, 2004, prepared by Rick Engineering Company. The design was previously approved by the City of Chula Vista. The proposed grading and drainage design for the McMillin EUC will honor this original design and will not exceed 20.4 acres draining northerly to this system.

The regional detention facility has been designed to capture and detain the 10-, 50-, and 100-year post-project flows associated with its specific drainage basin, including 20.4 acres of the McMillin EUC project area, down to the pre-project levels. Because of the existing regional detention facility and because the runoff contributed from the McMillin EUC project area will be contained in existing storm drain pipes for the entire length of travel between the McMillin EUC and the existing regional detention facility. However, the McMillin EUC project design will incorporate LID IMPs where feasible to address flow control (in addition to treatment) for runoff before leaving the site without relying on the off-site facility. The existing Poggi Canyon Regional Detention Facility represents a second line of defense for protection of downstream receiving waters from erosion due to runoff from the northern portions of the project.

2. Central Drainage

The central portion of the McMillin EUC project area will be served by an on-site storm drain system that will convey runoff to an existing storm drain system that conveys runoff westerly under State Route 125 to Otay Ranch Village 7. The runoff from the central portion of McMillin EUC will co-mingle with runoff from off-site from State Route 125 and Otay Ranch Village 7. It will be discharged directly from the storm drain system under State Route 125 to the existing Wolf Canyon Water Quality and Extended Detention Basins, which ultimately discharge to Wolf Canyon. The existing Wolf Canyon Water Quality and Extended Detention Basins were designed as part of Otay Ranch Village 7. The design for the existing Wolf Canyon Water Quality and Extended Detention Basins is described in the reports titled, "Water Quality Technical Report for Otay Ranch Village 7," dated September 22, 2005, prepared by Rick Engineering Company, and "Drainage Study for McMillin Village 7 Vista Verde," dated November 29, 2004, prepared by Rick Engineering Company. The storm drain system and the existing Wolf Canyon Water Quality and Extended Detention Basins were designed assuming the area of the McMillin EUC contributing to the basins would be approximately 164 acres and the land use would be the McMillin EUC. The calculations for the storm

drain system are included in the report titled, "Drainage Study for McMillin Village 7 Vista Verde," date November 29, 2004, prepared by Rick Engineering Company. The design was previously approved by the City of Chula Vista and the SDRWQCB. The proposed grading and drainage design for the McMillin EUC will honor this original design and will not exceed approximately 164 acres draining to this system.

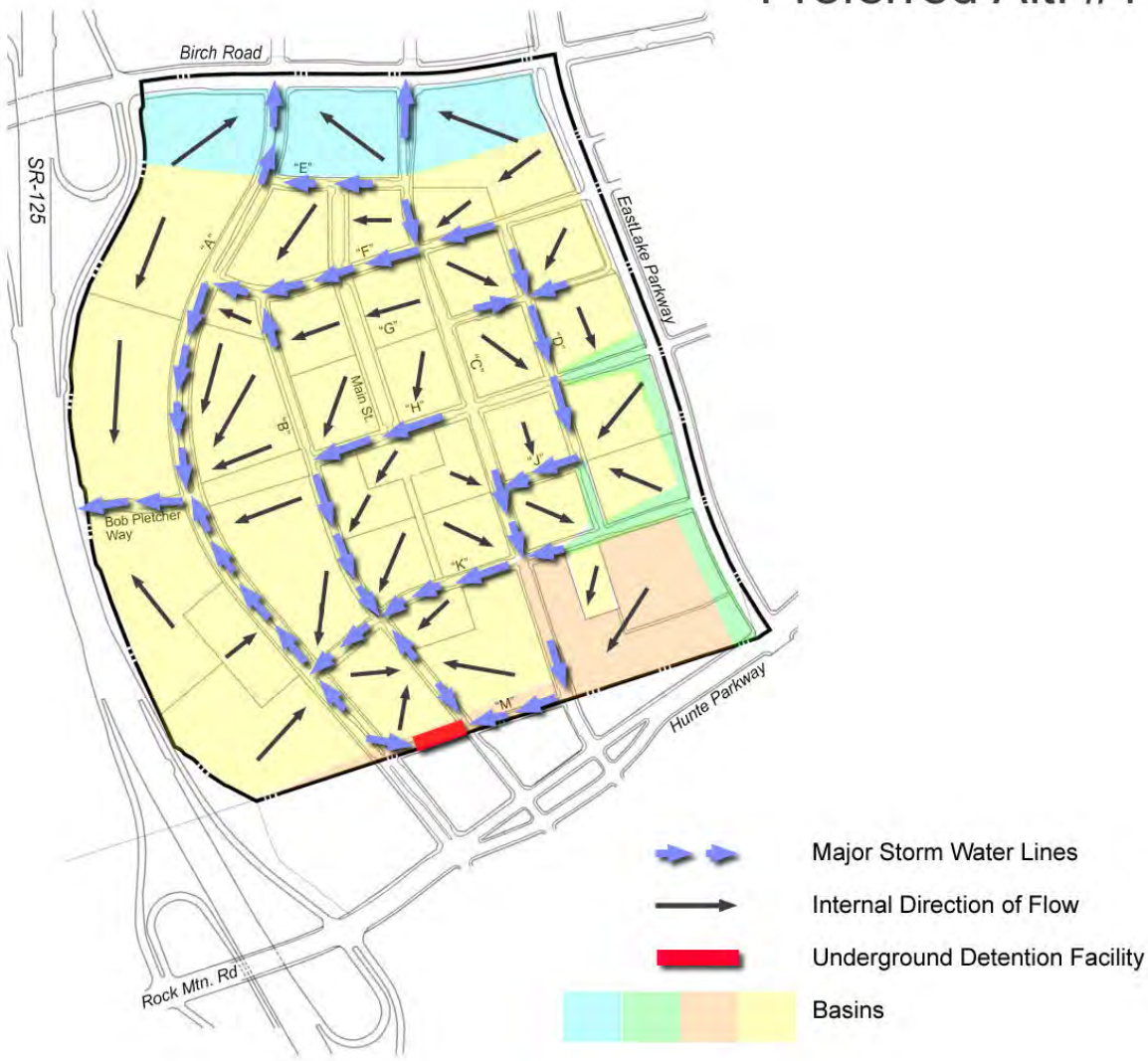
The Wolf Canyon facility has been designed to capture and detain the 2-, 10-, and 100-year post-project flows associated with its specific drainage basin, including approximately 164 acres of the McMillin EUC project area, down to pre-project levels. The Wolf Canyon facility is also numerically sized to treat the runoff, including runoff from the McMillin EUC, based on numeric sizing requirements for treatment control BMPs provided in the City of Chula Vista's Storm Water Standards Manual. The facility is compromised of three basins. The first basins is the forebay, which is designed to capture trash and debris and numerically size to treat the runoff. Downstream of this forebay, there are two extended detention basins in series. Because of the existing Wolf Canyon Water Quality and Extended Detention Basins and because the runoff contributed from the McMillin EUC project area will be directly discharged to the facility via a storm drain system. However, the McMillin EUC project design will incorporate LID IMPs where feasible to address flow control for runoff before leaving the site without relying solely on the off-site facility. The existing Wolf Canyon Water Quality and Extended Detention Basins represent a second line of defense for protection of downstream receiving waters from erosion due to runoff from the central portions of the project.

3. Southerly Drainage

The southern portion of the McMillin EUC project area drains to two distinct un-named drainages which each continue southerly to the Otay River. While it is anticipated in the future, presently there is no downstream development along these drainages or master planned drainage facilities between the southern boundary of the proposed McMillin EUC project site and the Otay River. On-site measures will be used to manage discharged rates and durations for runoff discharging southerly from the EUC project site for protection from downstream erosion. In addition, on-site measures for 10-, 50-, and 100-year detention for flood control purposes will be implemented. The on-site measures will consist of one or a combination of the following, to be determined during engineering design of the project: LID measures sized for decentralized flow control throughout the southerly draining portion of the project area; underground detention facilities located on-site within the McMillin EUC .

Drainage within Eastern Urban Center is conceptually depicted in Exhibit VII-5 and VII-6 (Storm Drainage Plan), based on the two alternative grading concepts respectively.

Storm Drainage
Preferred Alt. #1



Eastern Urban Center
OTAY RANCH

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Source: Rick Engr
Urban Design: RTKL
Cinti Land Planning
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Exhibit VII-5

Storm Drainage
Alt. #2

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Eastern Urban Center
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Source: Rick Engr
Urban Design: RTKL
Cinti Land Planning
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Exhibit VII-6

4. Urban Run-off

The Otay Ranch GDP requires that applicants prepare an Urban Run-off Plan for the first SPA within the drainage area of the Otay Reservoir. The Otay Ranch Eastern Urban Center SPA does not drain into the Otay Reservoir drainage basin, thus there is no requirement for additional Otay Reservoir urban run-off planning as a condition of this SPA.

The northernmost portion of the EUC drains to Poggi Canyon and a existing regional detention basin located near Olympic Parkway, west of the Paseo Ranchero. The central portion of the EUC drains to Wolf Canyon via Village Seven through a series of detention basins. The remaining parcel, in the southeast corner of the project will continue draining southeasterly via an existing system in to an un-named tributary, ultimately connecting to the Otay River downstream of the reservoir.

The EUC will employ best management practices (BMPs) to address water quality for both the construction and post-construction phases of the project. The overall project and each individual sub-project will be responsible for meeting site design, source control, low impact development, treatment control, and hydromodification requirements in accordance with the following Permits and Regulations: 1. Most current National Pollutant Discharge Elimination System (NPDES) General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities. Otherwise referred to as the General Construction Permit. 2. California Regional Water Quality Control Board San Diego Region Order No. R9-2007-001 NPDES No. CAS0108758 Waste Discharge Requirements for Dischargers of Urban Runoff From the Municipal Separate Storm Sewer Systems (MS4s) Draining to the Watershed of the County of Sand Diego, The Incorporated Cities of San Diego County, The San Diego Unified Port District, and the San Diego County Regional Airport Authority. Otherwise referred to as the Municipal Permit. 3. City of Chula Vista's January 2008 Development Storm Water Manual for Development and Redevelopment Projects. Otherwise referred to as the City's SUSMP. 4. The most current version of the Rick Engineering Company Report titled, Water Quality Technical Report for the Eastern Urban Center. Otherwise referred to as the site specific WQTR. This WQTR will be prepared in conformance with the regulations presented on the Municipal Permit and the City's SUSMP. 5. The most current version of Storm Water Pollution Prevention Plan. Otherwise referred to as the site specific SWPPP. This SWPPP will be in conformance with the regulations presented in the General Construction Permit and the City's SUSMP. At this time, a site specific SWPPP has not been prepared. However, upon commencement of construction this document will be prepared and processed (if required). The project will, however, be required to comply with the approved Preliminary Water Quality Technical Report, the City's Stormwater Manual, and the NPDES Permit.

F. Roads

Roads and other circulation components of the Eastern Urban Center development plan are fully described in Chapter III of this SPA Plan and with additional specific details in the FBC. The phasing and financing of roads is more thoroughly addressed in the Otay Ranch Eastern Urban Center SPA PFFP.

The Otay Ranch GDP establishes the following goals for the transportation system:

> *GOAL: PROVIDE A SAFE AND EFFICIENT TRANSPORTATION SYSTEM WITHIN OTAY RANCH WITH CONVENIENT LINKAGES TO REGIONAL TRANSPORTATION ELEMENTS ABUTTING THE OTAY RANCH.*
>
> *GOAL: ACHIEVE A BALANCED TRANSPORTATION SYSTEM WHICH EMPHASIZES ALTERNATIVES TO AUTOMOBILE USE AND IS RESPONSIVE TO THE NEEDS OF RESIDENTS.*

The roads and other components of the Eastern Urban Center SPA transportation system described in Chapter III of this SPA Plan provide a range of transportation facilities consistent with these goals and other provisions of the Otay Ranch GDP.

G. Schools

The Otay Ranch General Development Plan requires the preparation of a School Master Plan for each SPA. This section addresses and satisfies the requirements for such a plan. Additionally, the phasing and funding of school facilities is addressed in the Otay Ranch EUC PFFP.

The Otay Ranch General Development Plan establishes the following goals for school facilities (Part II, Chapter 5, Section E, Subsection 8.c):

> *GOAL: PROVIDE HIGH QUALITY K-12 EDUCATIONAL FACILITIES FOR OTAY RANCH RESIDENTS BY COORDINATED PLANNING OF SCHOOL FACILITIES WITH THE APPROPRIATE SCHOOL DISTRICT.*
>
> *GOAL: COORDINATE THE PLANNING OF ADULT EDUCATIONAL FACILITIES WITH APPROPRIATE DISTRICT.*

The Otay Ranch General Development Plan establishes the following threshold for school facilities (Part II, Chapter 5, Section E, Subsection 8.b):

> *Threshold: Additional facilities needed to serve children generated by the new development shall be provided concurrent with need, and shall be of the quality and quantity to meet, at a minimum, State Department of Education standards.*

Eastern Urban Center includes 2,983 residential dwelling units. These units would generate approximately 624 elementary students at full build-out according to Chula Vista Elementary School District. The Sweetwater Union High School District has approved a site for a Middle/High school adjacent to the EUC in Village 11.

Table F
Student Generation

Grade	Generation Rate	Dwelling Units	Students
K-6 - Elementary	0.2091	2,983	624
7-8 - Middle School	0.063	2,983	188
9-12 - High School	0.095	2,983	283
TOTAL STUDENTS			**1,095**
			Source: CVESD & SUHSD

The General Plan/GDP update, approved in December 2005, indicated the potential for a combined high school/middle school, when is being constructed by the District, adjacent to the EUC in Village 11. An additional high school is available immediately west of the EUC in Village 7. An urban elementary school site of five to six acres is shown as an overlay in District 9 on the EUC Site Utilization Plan. The Site Utilization Plan also indicates District 10 is an alternative location if District 9 is rejected by the school district. The project sponsor has school mitigation agreements with both school districts. Any units and non-residential intensity displaced by a school will be reallocated to any part of the plan, east of street "B" and north of street "K". This reallocation shall be accomplished as an administrative intensity transfer, as provided for in Chapter IV of the EUC Form Based Code.

H. Child Care Facilities

The Otay Ranch GDP establishes the following goal for child care facilities:

> *GOAL: PROVIDE ADEQUATE CHILD CARE FACILITIES AND SERVICES TO SERVE THE OTAY RANCH PROJECT AREA.*

The Otay Ranch GDP establishes the following threshold for child care facilities:

> *Threshold: Identify sites for child care and pre-school facilities adjacent to or as part of public and private schools, religious assembly uses, village center employment areas, residential areas, and other locations deemed appropriate.*

The City of Chula Vista has adopted the Chula Vista General Plan policy direction for the provision of adequate child care facilities necessary to serve existing and future developed areas in the City.

Child care uses may be allowed as a primary or an accessory use. Facility-based (not in a home) child care may be conducted by non-profit, quasi-public organizations or commercial providers. In

addition, day nurseries, daycare schools or nursery schools are permitted uses in the EUC Land Use Districts (see Eastern Urban Center SPA PC District Regulations). They are specifically named as permitted uses with all non-residential dominant districts, which would make them available to both residents as well and employees in the EUC.

The State has adopted regulations related to licensing, application procedures, administrative actions, enforcement provisions, continuing requirements and physical environment for child day care and day care centers. All child care facilities within the SPA will need to comply with state, as well as local regulations.

I. Police & Fire Services

1. Law Enforcement

The Otay Ranch GDP establishes the following goal for law enforcement facilities:

> *GOAL: PROTECTION OF LIFE AND PROPERTY AND PREVENTION OF CRIME OCCURRENCE.*

The Otay Ranch GDP also establishes the following threshold for law enforcement services within urban areas which apply to the Eastern Urban Center SPA:

> *Threshold: Urban Service: Properly equipped and staffed law enforcement units shall respond to 81 percent of "Priority One" emergency calls within 7 minutes and maintain an average response time for all "Priority One" emergency calls of 5.5 minutes or less. Urban Service: Properly equipped and staffed law enforcement units shall respond to 57 percent of "Priority Two Urgent" calls within 7 minutes and maintain an average response time to all "Priority Two" call of 7.5 minutes or less.*

The Otay Ranch General Development Plan adopted in 1993 included the following implementation measure to meet stated goals and objectives for urban services:

> *One 'central' police station located in the Eastern Urban Center is necessary to serve the Otay Ranch Project Area at build-out, in conformance with the goals, objectives and policies.*
>
> *Additional facilities within villages or shared use of other public facilities may be constructed at the SPA level. The size and character of these facilities will be determined, in part, by the necessary operation structure and cost by jurisdictional arrangement.*

*Storefronts can serve as 'outlets' for multiple civic services, such as fire safety or public information, in addition to law enforcement services.*2

Since adoption of the GDP in 1993, it was determined that the size, character, and operational structure of law enforcement facilities on a city-wide basis would better be served by a central law enforcement facility, which was adopted and is now in operation. The EUC SPA permits both law enforcement facilities and storefront public service facilities, if prior to build-out of the Otay Ranch Project, the current operation structure for law enforcement in the City were to change. Based on current policy there will be no police sub-stations required for the EUC

.

The principles of "Crime Prevention Through Environmental Design" (CPTED) will be recognized during the design and implementation of the EUC project to reduce the opportunity for criminal activity and to help foster social interaction among residents and visitors. Considerations will be given to controlling access points to public and private spaces, by maximizing visibility of public areas, such as parks and paseos, and by using building and structure features, orientation and design to reinforce and define boundaries between public and private spaces. Rental properties will participate in the Crime Free Multi-Housing Program, which addresses security standards and includes an on-site manager as a liaison to the Chula Vista Police Department.

2. Fire Protection & Emergency Medical Services

The Otay Ranch GDP establishes the following goal for fire protection facilities and emergency medical services:

GOAL: PROVIDE PROTECTION TO THE OTAY RANCH PROJECT AREA AND SURROUNDING COMMUNITIES FROM LOSS OF LIFE AND PROPERTY DUE TO FIRES AND MEDICAL EMERGENCIES.

The Otay Ranch GDP also establishes the following threshold for fire protection facilities and emergency medical facilities in urban communities which applies to the Eastern Urban Center SPA:

Threshold: Provide sufficient fire and emergency services facilities to respond to calls within the Otay Ranch urban communities within a 7 minute response time in 80% of the cases.

The project is within the City of Chula Vista and is served by the City of Chula Vista Fire Department (CVFD). The closest CVFD stations to the project site are: Fire Station 7, located in Otay Ranch Village Two; Fire Station 6, located at 605 Mount Miguel Road; and, Fire Station 8, located at 1180 Woods Drive.

The Fire Master Plan for the City of Chula Vista provides for a nine fire station network at build-

out. The Otay Ranch GDP plans for the location of fire stations in Otay Ranch Villages Two and Nine of the Otay Valley Parcel and within Village Thirteen of the Proctor Valley Parcel. Construction, equipping and staffing new fire stations will meet the anticipated demand for fire protection services throughout Otay Ranch. A new fire station is provided for at the southwestern corner at the intersection of Street "A" and Street "F". The location has been approved by the CVFD. The station will have a more "urban" design with two stories and located close to the street, consistent with the EUC urban character goals, than a typical suburban station. The Fire Master Plan is being updated, which once adopted may add more fire stations within the overall effective fire force network.

The Otay Ranch GDP requires that as a condition of SPA plan approval, the Fire Department review fuel modification plans. The Draft Brush Management Program, an addendum to the City of Chula Vista's Landscape Manual, prepared by the Chula Vista Fire Department was the basis for information included in the Fuel Modification and Brush Management section of the SPA One Parks, Recreation, Open Space and Trails Master Plan, which will also be implemented as applicable in the proposed project. There is no urban wildland interface in the EUC, so no Fire Protection Plan will be required.

As a fire prevention measure, all commercial buildings within the commercial center four stories tall or 40 feet in height will be required to be equipped with fire sprinklers, per City Ordinance. The adopted California Fire and Building Codes will be held as "standards" concerning fire and life safety provisions.

Emergency medical services are provided by American Medical Response on a contract basis for the City of Chula Vista, National City and Imperial Beach. There are six South County paramedic units. Three are located in Chula Vista, two in National City and one unit serves Imperial Beach. The Otay Ranch Eastern Urban Center may be served by these existing emergency service facilities which will expand as the population of Otay Ranch increases. AMR is responsible for upholding a response time of 10 minutes, 90% of the time and updates service areas as an ongoing process to meet this standard.

J. Library Services

The Otay Ranch GDP establishes the following goal for library facilities:

GOAL: SUFFICIENT LIBRARY FACILITIES TO MEET THE INFORMATION AND EDUCATION NEEDS OF OTAY RANCH RESIDENTS.

The Otay Ranch GDP establishes the following threshold for library facilities:

Threshold: 500 square feet (gross) of adequately equipped and staffed regional library facilities per 1,000 population.

The Otay Ranch Facility Implementation Plan calls for the location of an approximately 36,750 square foot. "main" library in the Eastern Urban Center and/or one or more village libraries, reducing the size of the main library in the EUC. The Site Utilization Plan indicates a potential library site within the civic core. Development of this facility within a mixed-use structure is under discussion. This could be a stimulant for intensifying the civic core and encourage other mixed-use buildings. The proposed location, adjacent to the civic plaza, will provide the opportunity for library sponsored or supported cultural events. The civic plaza needs to be activated with ongoing cultural events.

K. Community Purpose Facilities (CPF)

The Otay Ranch General Development Plan establishes the following goal for community and regional purpose facilities (Part II, Chapter 5, Section D, Subsection 5.c).

> *GOAL: DESIGNATE AREAS WITHIN THE OTAY RANCH PROJECT AREA FOR RELIGIOUS, ANCILLARY PRIVATE EDUCATIONAL, DAY CARE, BENEVOLENT, FRATERNAL, HEALTH, SOCIAL AND SENIOR SERVICES, CHARITABLE, YOUTH RECREATION FACILITIES AND OTHER COUNTY FACILITIES.*

The Otay Ranch General Development Plan establishes the following threshold for community and regional purpose facilities (Part II, Chapter 5, Section D, Subsection 5.b):

> *Threshold: Implement a Community Purpose Facility zone and a Regional Purpose Facility zone to provide land for religious, day care, health, social, and senior and youth recreation facilities.*

The Community Purpose Facility (CPF) zone is implemented in the Eastern Urban Center PC District Regulations which includes CPF as an allowed land use in many locations. The need for a Regional Purpose Facility is discussed in Section M, below.

The Otay Ranch General Development Plan establishes the following SPA processing requirement for community and regional purpose facilities.

- Specific acreage requirements identified and land designated for Community Purpose Facility and Regional Purpose Facility uses. (Land Plan)

The City of Chula Vista Community Purpose Ordinance requires that new planned communities identify 1.39 acres of net usable land per 1,000 proposed residents for community purpose facilities. The Eastern Urban Center SPA population generates a demand for 10.7 acres of Community Purpose Facility sites, as shown in Table G (Required Community Purpose Facility Acres). This requirement has been partially fulfilled with CPF credit from previous projects by the SPA applicant. However, additional CFP facilities may be located within the EUC. "CPF equivalency acres" may be utilized to convert CPF acres to building area so that CPF uses within a mixed use building may be provided and

properly credited. The CPF building area to land ratio is approximately one to four or 25 percent (10,000 square feet of building floor area (excluding parking) devoted to CPF uses is equivalent to one acre of CPF land). In addition, parking for all CPF uses in a mixed use building will be provided as required in the FBC.

Compliance with the CPF provision requirements will be monitored at each stage of Design Review as provided for in the EUC PC District Regulations administrative monitoring requirements.

Table G
Required Community Purpose Facility Acres

Unit Type	Units	Persons/DU	Population	CPF Acres Required
EUC residential	2,983	2.58	7,696	10.70
TOTALS	**2,983**	**2.58**	**7,696**	**10.70**
Credit from Previous Projects*				9.34
CPF Area Requirement**				1.36
Sites Provided in EUC				CPF Acres or Equivalent Sq. Ft. to be provided on-site to bedetermined during project implementation.*
TOTAL PROVIDED				**10.70**

** Credits from previous projects per Chula Vista letter dated January 22, 2004. See appendix.*
*** Refer to the FBC for additional requirements for providing required CFP facilities.*

L. Civic Facilities

The Mixed Use Civic/Office District provides a location for any further civic facilities, including a cultural arts facility, that may locate in eastern Chula Vista. A city-wide Cultural Arts Master Plan is being considered for adoption. The EUC should be considered as a high priority and appropriate location for a cultural arts facility, if one is proposed in eastern Chula Vista.

M. Regional Facilities

Per correspondence from the County of San Diego, no regional facilities, such as a post office or court house, are currently planned for eastern Chula Vista, but the Mixed Use Civic/Office District provides an ideal location for these uses if needed.